

David H. Gent

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Professional Experience

2004 to Present, Research Plant Pathologist, USDA-ARS, and Courtesy Assistant Professor, Department of Botany and Plant Pathology, Oregon State University, Corvallis, OR

Educational Experience

Ph.D., Plant Pathology, 2004. "Biology, Epidemiology, and Management of *Xanthomonas* Leaf Blight of Onion," Colorado State University.

M.S., Plant Pathology, 2002, "Adaptation of Potato Disease Forecast Models and Improved Pesticide Efficacy for Colorado," Colorado State University.

B.S., Crop and Soil Science (Biology Minor), 1999, Oregon State University.

Awards and Honors

2006 Performance Bonus Award, USDA-ARS

2003 Bert Bohmont Award for Excellence in Extension Education, Department of Bioagricultural Sciences and Pest Management, Colorado State University

2002 R. Ralph Baker Award for Research Excellence, Department of Bioagricultural Sciences and Pest Management, Colorado State University

2002 University Graduate Fellowship, Colorado State University

Professional Affiliations and Memberships

2001 to current American Phytopathological Society

1996 to 1999 Soil Science Society of America

Grants Funded (as PI or co-PI)

1. Western Region IPM, 2005, Reduced fungicide use for management of hop downy mildew. \$40,000 (3 years)
2. Agricultural Research Foundation, 2005, Molecular detection of the hop downy mildew pathogen, \$10,000 (1 year)
3. Washington State Commission on Pesticide Registration, 2005, Integrated management of hop diseases and pests. \$10,000 (1 year)
4. Western Region IPM, 2003, Seed transmission and ecology of *Xanthomonas campestris* of onion. \$53,176 (2 years)
5. USDA CAR, 2002, Integrated management of *Xanthomonas* leaf blight of onion by cultural practices, disease forecasting, and biologically-based pesticides. \$440,741 (3 years)
6. South Platte Farms/Colorado Onion Association, 2002, The effect of irrigation method and crop rotation on bacterial and fungal disease development in onion. \$3,000 (1 year)

Peer-Reviewed Publications (published and in review)

1. Gent, D. H., du Toit, L. J., Fichtner, S. F., Mohan, S. K., Pappu, H. R., and Schwartz, H. F. 2006. *Iris yellow spot virus*: An emerging threat to onion bulb and seed production. Plant Dis. In journal review.

2. Gent, D. H., Mahaffee, W. F., and Turechek, W. W. 2006. Spatial heterogeneity of the incidence of powdery mildew in hop cones. *Plant Dis.* *In journal review.*
3. Lang, J. M., Gent, D. H., and Schwartz, H. F. 2006. Lang, J. M., Gent, D. H., and Schwartz, H. F. 2005. Management of *Xanthomonas* leaf blight of onion with h-mutant bacteriophages and a plant activator. *Plant Dis.* *In journal review.*
4. Gent, D. H., and Schwartz, H. F. 2005. Effect of nitrogen fertilization and seed contamination on epiphytic populations of *Xanthomonas axonopodis* pv. *allii* and development of *Xanthomonas* leaf blight of onion. Online. Plant Health Progress doi:10.1094/PHP-2005-0331-01-RS.
5. Gent, D. H., and Schwartz, H. F. 2005. Management of *Xanthomonas* leaf blight of onion with a plant activator, biological control agents, and copper bactericides. *Plant Disease* 89:631-639.
6. Gent, D. H., Lang, J. M., and Schwartz, H. F., 2005. Epiphytic survival of *Xanthomonas axonopodis* pv. *allii* and *X. axonopodis* pv. *phaseoli* on onion and dry bean. *Plant Disease* 98: 558-564.
7. Gent, D. H., Lang, J. M, Bartolo, M. E., and Schwartz, H. F. 2005. Inoculum sources of *Xanthomonas axonopodis* pv. *allii* in Colorado. *Plant Disease* 89:507-514.
8. Gent, D. H., Al-Saadi, A., Gabriel, D. W., Louws, F. J., Ishimaru, C. A., and Schwartz, H. F. 2005. Pathogenic and genetic relatedness among *Xanthomonas axonopodis* pv. *allii* and other pathovars of *X. axonopodis*. *Phytopathology* 95:918-925.
9. Gent, D. H., Schwartz, H. F., and Khosla, R. 2004. Distribution and incidence of *Iris yellow spot virus* in Colorado and its relation to onion plant population and yield. *Plant Disease* 88: 446-452.
10. Gent, D. H., Schwartz, H. F., Ishimaru, C. A., Louws, F. J., Cramer, R. A., and Lawrence, C. B. 2004. Polyphasic characterization *Xanthomonas* strains from onion. *Phytopathology* 94:184-195.
11. Gent, D. H., Schwartz, H. F., and Nissen, S. J. 2003. Effect of commercial adjuvants on vegetable crop fungicide coverage, absorption, and efficacy. *Plant Disease* 87:591-597.
12. Schwartz, H. F., Otto, K. J., and Gent, D. H. 2003. Relation of temperature and rainfall to development of *Xanthomonas* and *Pantoea* leaf blights of onion in Colorado. *Plant Disease* 87:11-14.
13. Gent, D. H. and Schwartz, H. F. 2003. Validation of potato early blight disease forecast models for Colorado using various sources of meteorological data. *Plant Disease* 87:78-84.
14. Schwartz, H. F., Brown, W. M., Blunt, T., and Gent, D. H. 2002. *Iris yellow spot virus* on onion in Colorado. *Plant Disease* 85:838.

Invited Book Chapters

1. Gent, D. H. 2006. Diseases Caused by Fungi. In Mahaffee, W. M. and Pethybridge, S. J., (eds.), Compendium of *Humulus* Diseases, APS Press, St. Paul, MN. *Submitted*.
2. Gent, D. H., and Schwartz, H. F. 2006. Diseases Caused by Bacteria and a Yeast. In Schwartz, H. F. and Mohan, S. K., (eds.), Compendium of Onion Diseases, APS Press, St. Paul, MN. *In press*.
3. Gent, D. H., and Schwartz, H. F. 2006. *Iris yellow spot virus*. In Schwartz, H. F. and Mohan, S. K., (eds.), Compendium of Onion Diseases, APS Press, St. Paul, MN. *In press*.

4. Gent, D. H., and Ocamb, C. M. 2006. Hop Diseases. In: Pscheidt, J. W., and C. M. Ocamb (eds), Pacific Northwest Plant Disease Management Handbook. Oregon State Extension Service. 593 pp.
5. Gent, D. H., and Ocamb, C. M. 2006. Bean Diseases (selected diseases). In: Pscheidt, J. W., and C. M. Ocamb (eds), Pacific Northwest Plant Disease Management Handbook. Oregon State Extension Service. 593 pp.
6. Gent, D. H., and Ocamb, C. M. 2006. Onion Diseases. In: Pscheidt, J. W., and C. M. Ocamb (eds), Pacific Northwest Plant Disease Management Handbook. Oregon State Extension Service. 593 pp.
7. Gent, D. H., and Ocamb, C. M. 2006. Tomato Diseases (selected diseases). In: Pscheidt, J. W., and C. M. Ocamb (eds), Pacific Northwest Plant Disease Management Handbook. Oregon State Extension Service. 593 pp.

Abstracts and Proceedings

1. Gent, D. G., Mahaffee, W. F., and Turechek, W. W. 2006. Spatial heterogeneity and sampling of hop powdery mildew in cones. *Phytopathology*. *Submitted*.
2. Gent, D. H., du Toit, L. J., Mohan, S. K., Pappu, H. R., and Schwartz, H. F. 2006. Emergence of *Iris yellow spot virus* in the western U.S. *Phytopathology*. *Submitted*.
3. Peetz, A., Mahaffee, W. F., Turechek, W. W., Thomas, C. S., Nelson, M., Ocamb, C. M., Gent, D. H., and Grove, G. G. 2006. Hop powdery mildew in the Pacific Northwest. *Phytopathology*. *Submitted*.
4. Fichtner, S. M., Gent, D. H., Schwartz, H. F., Cranshaw, W. S., Mahaffey, L., and Khosla, R. 2004. Geospatial relationships of *Iris yellow spot virus* and thrips to onion production in Colorado. Proc. 2004 National Allium Res. Conf., Grand Junction, Colorado, Dec. 8-10, 2004. pp. 149-151.
5. Gent, D. H., Schwartz, H. F., Lang, J. M., and Ishimaru, C. A. 2004. Xanthomonas leaf blight of onion: biology, epidemiology, and management. Proc. 2004 National Allium Res. Conf., Grand Junction, Colorado, Dec. 8-10, 2004. pp. 153-162.
6. Schwartz, H. F., Gent, D. H., Fichtner, Hammon, R. W., and Khosla. 2004. Integrated management of *Iris yellow spot virus* in onion. Proc. 2004 National Allium Res. Conf., Grand Junction, Colorado, Dec. 8-10, 2004. pp. 207-212.
7. Oman, C., Gent, D. H., Fichtner, S.M, and Schwartz, H. F. 2004. Distribution of *Iris yellow spot virus* in weeds and onion transplants in Colorado. Proc. 2004 National Allium Res. Conf., Grand Junction, Colorado, Dec. 8-10, 2004.
8. Gent, D. H., and Schwartz, H. F. 2004. Inoculum sources of *Xanthomonas axonopodis* pv. *allii* in Colorado. *Phytopathology* 94:S33.
9. Gent, D. H., and Schwartz, H. F. 2004. Managing *Iris yellow spot virus* of onion with cultural practices, host genotype, and novel chemical treatments. *Phytopathology* 94:S34.
10. Gent, D. H., and Schwartz, H. F. 2004. Managing Xanthomonas leaf blight of onion with copper bactericides and acibenzolar. *Phytopathology* 94:S34.
11. Lang, J. M., Gent, D. H., and Schwartz, H. F. 2004. Alternative strategies for onion Xanthomonas leaf blight management. *Phytopathology* 94:S57.
12. Lang, J. M., Schwartz, H. F., and Gent, D. H. 2004. Alternative strategies for managing onion Xanthomonas leaf blight. Proc. 2004 National Allium Res. Conf., Grand Junction, Colorado, Dec. 8-10, 2004.

13. Gent, D. H., Schwartz, H. F., and Ishimaru, C. A. 2003. Population dynamics of *Xanthomonas campestris* pv. *allii* on leaves of pulse crops and weeds. *Phytopathology* 93:S29.
14. Gent, D. H. and Schwartz, H. F. 2003. Screening of onion germplasm for resistance to *Xanthomonas* leaf blight. *Phytopathology* 93:S29.
15. Gent, D. H. and Schwartz, H. F. 2002. Epidemiology of *Xanthomonas* leaf blight in relation to the critical period for bactericide applications Proc. of the 2002 National *Allium* Research Conference, Dec. 11- 14, 2002, Pasco, WA.
16. Gent, D. H., Schwartz, H. F., Ishimaru, C. A., Cramer, R. A., and Lawrence, C. B. 2002. Polyphasic characterization of *Xanthomonas campestris* from onion. Proc. of the 2002 National *Allium* Research Conference, Dec. 11- 14, 2002, Pasco, WA.
17. Gent, D. H., Stushnoff, C., and Schwartz, H. F. 2002. Thermal and UV tolerance of onion seed: Implications for bacterial disease management. Proc. Of the 2002 National *Allium* Research Conference, Dec. 11- 14, 2002, Pasco, WA.
18. Gent, D.H. and Schwartz, H.F. 2001. Effects of adjuvant chemistry on coverage, absorption, and efficacy of fungicides. *Phytopathology* 91:S31.

Extension Publications, Technical Reports and Popular Press

1. Schwartz, H. F. and Gent, D. H. 2005. High Plains Integrated Pest Management Guide for Colorado-Western Nebraska-Wyoming-Montana. Online at <http://highplainsipm.org/>.
2. Gent, D.H., McMillian, M. S., and Schwartz, H. F. 2005. Evaluation of potato early blight control using various forecasting systems operated with regional weather data, 2002 and 2003. *Fungicide and Nematicide Tests* 60:V062
3. Schwartz, H., Gent, D., and Fichtner, S. 2005. More on Iris Yellow Spot. *Onion World*, December:6-9. (invited)
4. Schwartz, H., and Gent, D. 2005. An Update on *Xanthomonas* Leaf Blight. *Onion World*, December:26-28.
5. Schwartz, H., and Gent, D. 2005. *Xanthomonas* Leaf Blight. Colorado State University Cooperative Extension Publication no. 2.951, Fort Collins, CO.
6. Lang, J. M., Gent, D. H., and Schwartz, H. F. 2004. Differential response of onion cultivars to onion *Xanthomonas* leaf blight. *Allium Improvement Newsletter* 14:15-17.
7. Vegetable Pathology Results, 2004. Colorado State University Cooperative Extension Publication, Fort Collins, CO.
8. Schwartz, H. F. and Gent, D. H. 2004. Disease forecast modeling of *Uromyces appendiculatus* in the High Plains bean production region. Annual Report of the Bean Improvement Cooperative 47:109-110.
9. Vegetable Pathology Results, 2003. Colorado State University Cooperative Extension Publication, Fort Collins, CO.
10. Gent, D. H. and Schwartz, H. F. 2002. Effect of adjuvants on coverage, absorption, and efficacy of bean fungicides. Annual Report of the Bean Improvement Cooperative 45:92.
11. Gent, D. H., Fitchner, S., and Schwartz, H. F. 2002. Evaluation of fungicide spray intervals for management of early blight of potato in northeastern Colorado, 2001. *Fungicide and Nematicide Tests* 57:V138.
12. Gent, D. H., Fitchner, S., and Schwartz, H. F. 2002. Evaluation of fungicides for dry bean rust, 2001. *Fungicide and Nematicide Test* 57:FC02.

13. Otto, K., Schwartz, H. F., Wickliff, E. R., and Gent, D. H. 2002. Development of an inoculum production method for *Sclerotinia sclerotium*. Annual Report of the Bean Improvement Cooperative 45:66
14. Gent, D. H., Fitchner, S., and Schwartz, H. F. 2002. Evaluation of AgBio 222 in managing major foliar diseases of potato in northeastern Colorado, 2001. Fungicide and Nematicide Tests 57:V137.
15. Schwartz, H. F., Brown, W. M., Blunt, T., and Gent, D. H. 2001. *Iris yellow spot virus* attacks western onions in 2001. Onion World, December:14.
16. McMillan, M.S., Gent, D.H., and Schwartz, H.F. 2000. Fungicide screening for early blight control in potato, 2000. Fungicide and Nematicide Tests 56:V46.
17. Vegetable Pathology Results, 2002. Colorado State University Cooperative Extension Publication, Fort Collins, CO.
18. Vegetable Pathology Results, 2001. Colorado State University Cooperative Extension Publication, Fort Collins, CO.
19. Vegetable Pathology Results, 2000. Colorado State University Cooperative Extension Publication, Fort Collins, CO.

Invited Presentations

1. Gent, D. H. 2005. Epidemiology and management of powdery and downy mildew of hop. Hop Research Council Summer Meeting, August 9-10, Yakima, WA.
2. Gent, D. H., and Schwartz, H. F. 2004. Management of onion diseases in Colorado. Empire State Vegetable Conference, February 11-12, Rochester, New York.
3. Gent, D. H., and Schwartz, H. F. 2004. Colorado onion production. Empire State Vegetable Conference, February 11-12, Rochester, New York.
4. Gent, D. H., and Schwartz, H. F. 2004. Iris yellow spot virus: Biology, Epidemiology, and Management. 2004 National Onion Association Annual Meeting, July 22, Denver, Colorado.
5. Gent, D. H., and Schwartz, H. F. 2004. Iris yellow spot virus: Biology, Epidemiology, and Management. 2004 Idaho-Eastern Oregon Onion Growers Association Annual Meeting, November 17, Pasco, Washington.
6. Gent, D. H., and Schwartz, H. F. 2004. Iris yellow spot virus: Biology, Epidemiology, and Management. 2004 Pacific Northwest Vegetable Growers Association Annual Meeting, January 14, Ontario, Oregon.
7. Schwartz, H. F., and Gent, D. H. 2004. A thrips-transmitted virus threatens the United States onion industry. Colorado State University Infectious Diseases Research Colloquium, April 5-6, Fort Collins, Colorado.